



Measles Outbreak 2014

A Communication Perspective on
Response

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Measles Outbreak

Presentation Outline:

- Population background
- Initiation of Outbreak
- Case count
- Communication difficulties
- Lessons learned



Measles Outbreak

State	Estimated Population	Number of Settlements	Estimated Number of Church Districts
Ohio	67,230	55	498
Pennsylvania	67,045	54	453
Indiana	50,195	21	356
Wisconsin	17,025	47	133
New York	16,470	50	122
Michigan	13,330	40	101
Missouri	11,000	42	94
Kentucky	9,750	35	78
Iowa	8,320	23	59
Illinois	7,140	18	51



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Settlement	State	Estimated Number of Church Districts	Estimated Population
Lancaster County Area	Pennsylvania	197	32,900
Holmes County Area	Ohio	251	32,630
Elkhart/LaGrange Area	Indiana	163	22,820
Geauga County Area	Ohio	108	15,230
Adams County Area	Indiana	57	8,210



Measles Outbreak

Confirmed Cases By Last Name

Last Name	Number of Cases	Percent of Cases
Yoder	42	21.5%
Miller	40	20.5%
Wengerd	35	17.9%
Raber	17	8.7%
Nisley	17	8.7%
Byler	12	6.2%
	9	4.6%
	7	3.6%
	6	3.1%
	4	2.1%
	2	1.0%
	1	0.5%
	1	0.5%
	1	0.5%
	1	0.5%
TOTAL	195	100.0%



Measles Outbreak

Amish Populations:

- Mennonite (New Order)
 - Except technology and willing to fly
- Old Order
 - Will only travel by buggy
 - Largest affiliation in Ohio
- Swartzentruber
 - Most conservative Amish group
 - No indoor plumbing, some outhouses
 - Resist change



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Outbreak Statistics



Measles Outbreak

- Onset of symptoms began 3/24/14
 - Two Amish travelers got sick in the Philippines
 - First diagnosed at Dengue Fever
 - Part of a mission group
 - Group and community were unvaccinated
- ODH notified 4/21 with second generation cases
- Outbreak ended 9/4/14 with 383 cases



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- Contact was made with Christian Aid Ministries (**CAM**).
 - Travel roster was made with contact information.
 - Two other groups were currently over in the Philippines and planning to return.
- Individuals listed on the travel rosters were interviewed to determine health and exposure status.
- In order to manage resources efficiently, staff identified the jurisdictions for each traveler and notified the appropriate health departments.



Measles Outbreak

- Contact with some of the Amish were done by phone and visits to homes.
- Individual that was one of the first confirmed cases served as point of contact.
- Daily communication took place with this gentleman and the information he was able to gather accounted for more than 35 confirmed cases.



Measles Outbreak

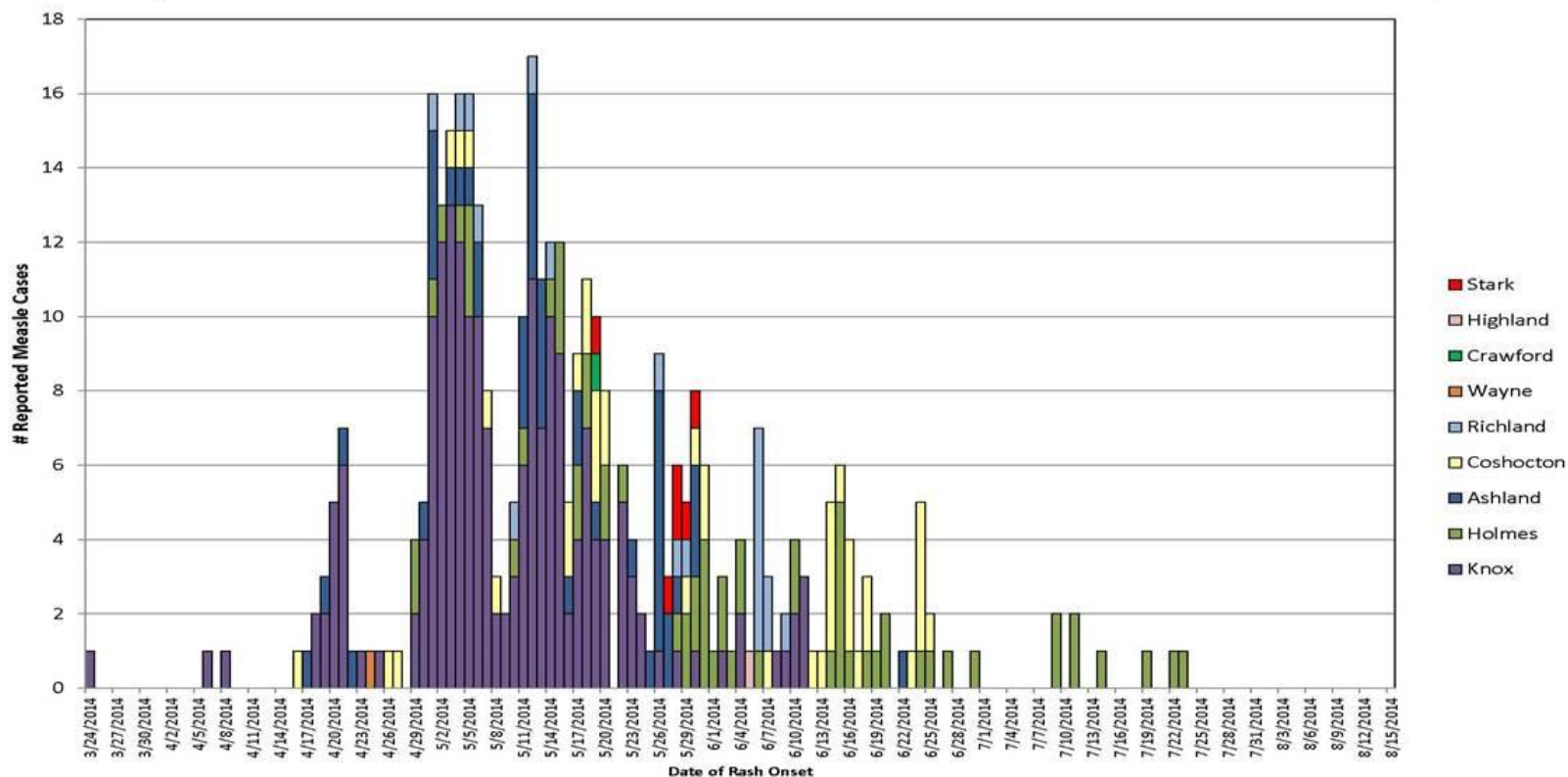
Outbreak Counties:

- Knox
- Holmes
- Ashland
- Coshocton
- Richland
- Stark
- Wayne
- Highland



Measles Outbreak

2014 Measles Outbreak, Ohio, Confirmed Cases by Date of Rash Onset, N=377

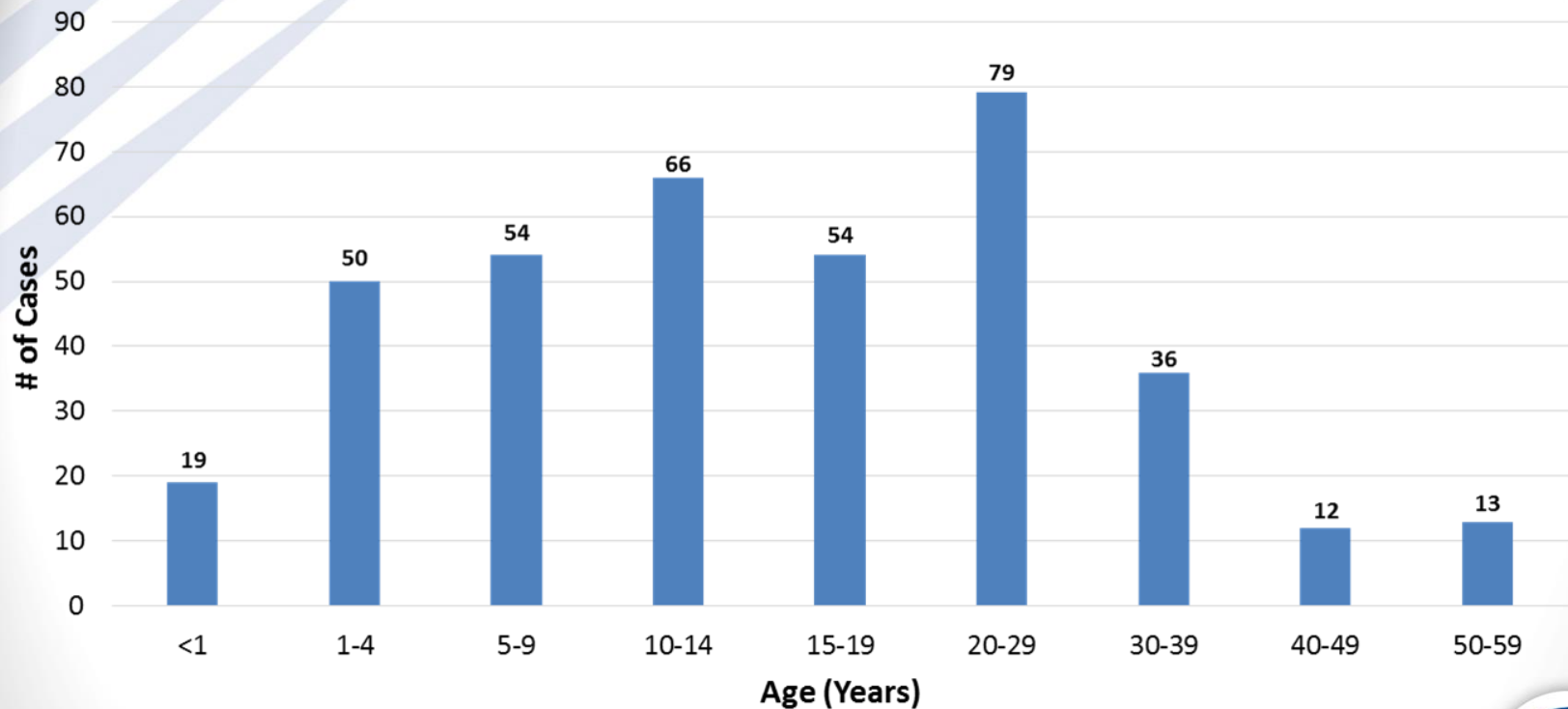


Data as of 10/2/2014

Source: Ohio Disease Reporting System

Measles Outbreak

Measles Outbreak by Age, Ohio, 2014



Measles Outbreak

Complications

- 11 cases (3 percent) hospitalized
 - Days hospitalized ranged from 1-6
- 212 cases (55 percent) had diarrhea
- 92 cases (24 percent) had otitis media
- 3 cases (2 percent) thrombocytopenia
- Less than 1 percent developed pneumonia
- **No deaths**



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Communication Plan



Measles Outbreak

- Conference calls with CDC and local health depts.
- Press Releases
- Flyers
- Radio
- Newspaper Ads
- Posters
- Developed Fact Sheets
- Social Media
- Door to Door



Measles Outbreak

MMR Vaccination Rates:

- First clinics held 4/24/14
 - All closed clinics held in the Amish community
- Several LHD's did combined clinics
 - One local clinic vaccinated 998 people
- Whole Outbreak: 12,372 doses administered



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- 18.3% of all measles cases (including all counties) received one dose of MMR.
- 29.3% of the cases who had a dose of MMR received their vaccination ≥ 2 weeks before the onset of measles symptoms.
- 70.7% did not receive their MMR in time for it to provide full protection.
- 77.6% of the group who received one dose of MMR but not in enough time to provide full protection were confirmed cases.



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Measles Outbreak

Door to Door Campaign:

- Person had to understand Amish beliefs
- Appropriately dressed
- No Subdivisions
- No Neighborhoods
- Traveling miles between families



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- CDC Public Health Advisors (**PHA**) also helped assist with the Measles investigation.
- Each morning, the assigned PHA would report to a LHD and travel out in the community.
- Attempts were made to ask questions about Measles and determine if any one had been sick or were currently sick.
- A PHA could only spend two weeks working on an investigation.
- Were all cases reported? Probably not.



Measles Outbreak

Facts about Measles

You may have heard about the many Amish who have come down with **measles**. Since April over 325 people have been sick and 8 were so sick that they had to stay overnight in the hospital.

People have had **measles** in Ashland, Coshocton, Crawford, Highland, Holmes, Knox, Richland, Stark and Wayne counties. Most of the people with measles live in Knox County, Holmes County and Ashland County.

Here are some facts about **measles**:

- A person who is sick with **measles** has a cough, sore eyes, runny nose, high fever, chills and a rash that usually starts on the head and spreads down the body. They may also have diarrhea, vomiting and need to drink plenty of water or they may get dehydrated.
- It takes about 14 days from the time a person comes into contact with the measles virus to begin to see the rash.

Travel FAQ

Can we travel to the areas that are affected with measles?
There are no travel restrictions for persons who have evidence of immunity to measles. Evidence of measles immunity includes documentation of age-appropriate measles-mumps-rubella (MMR) vaccination, laboratory evidence of immunity, laboratory confirmation of disease, or birth before 1957.

Is it safe to travel with my infant to these affected areas?
Parents with infants too young to be vaccinated should consider not traveling with them to areas where measles outbreaks are occurring. Measles can cause severe complications in infants and young children. Therefore, it is better to avoid potential exposures for infants too young to be vaccinated.

Are there any restrictions on adults with different medical conditions?
Recommendations to avoid travel to areas where measles outbreaks are occurring are based on whether an individual has evidence of measles immunity. Individuals who do not have evidence of measles immunity are encouraged to avoid travel to areas where measles outbreaks are occurring until they can be appropriately vaccinated against measles.

Are you discouraging anyone from the affected counties to travel outside the county?
Most individuals who live within the affected counties would have no travel restrictions. However, as with any infectious disease, individuals infected with measles should avoid travel until they are no longer infectious. Persons with measles are considered infectious from 4 days before until 4 days after onset of rash. The local public health department may make quarantine recommendations to close contacts of persons ill with measles, including staying at home from 7 to 21 days after exposure to the ill person.

Measles-Mumps-Rubella FAQ

How can I protect my child and myself against measles?

The best protection against measles for individuals and the community is through routine immunization with MMR vaccine. This is a combined vaccine that protects against measles, mumps and rubella. In almost all cases, people who received the MMR vaccine are protected against measles. However, in rare cases, people who get the vaccine can still become infected with the measles if exposed to the virus. Two doses of MMR vaccine provide full protection against measles to 99 out of every 100 persons vaccinated.

At what age should children get the MMR vaccine?

Children should receive the first dose of MMR vaccine at 12-15 months of age and the second dose at 4-6 years of age (or no earlier than 28 days after the first dose). Older children who have not been vaccinated should receive two doses of MMR vaccine at least 28 days apart. The recommended age for receiving MMR vaccine might change if there is a measles outbreak in your community, or if you will be traveling to a foreign country. In such cases, check with your child's health care provider to ensure that your child is properly vaccinated to protect against measles.

Do adults need to be vaccinated against measles?

All U.S. adults born during or after 1957 should also get at least one dose of MMR vaccine unless they can show they have either the vaccine or had a blood test that showed they were immune to measles. Healthcare workers should have two doses of MMR vaccine.



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Have you been exposed to measles?

Several unvaccinated people from the Danville Amish community recently returned from the Philippines where they were exposed to measles. If you come in contact with these individuals or their family members and have not been vaccinated for measles (MMR vaccine) you could get measles. It is highly contagious!!!

Measles Symptoms Include:

Fever, runny nose, cough, pink eye and a distinctive, blotchy red rash all over the body. Symptoms generally begin about 7-21 days after a person is infected

To Avoid the Measles, Get Vaccinated!

**For more information, contact the
Knox County Health Department
at 399-8009**

Traveling in Ohio to

SUMMER EVENTS?

Are you protected from measles?

Ohio is currently experiencing a **Measles Outbreak** concentrated mostly in the North Central Area including **Ashland, Coshocton, Holmes, Knox, Richland, Stark and Wayne Counties.**

Measles is highly contagious and can cause serious health problems. If you or your family members have not been vaccinated for measles (MMR vaccine) you could get measles.

Measles symptoms include:

Fever, runny nose, cough, pink eye and a distinctive red rash all over the body. Symptoms generally begin about 7 to 21 days after a person is infected.

To Avoid the Measles, Get Vaccinated!



Measles Outbreak

Barriers to Self Quarantine:

- Wedding Season
- Summer Auction
- High Tourism
- Easter



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Barriers for communication and vaccination:

- Cost of travel
- Concerns about vaccine safety
- Disapproval by Bishops
- Church every other Sunday
 - Shoulder to shoulder
 - Lasted all day



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Understanding Church Districts:

- A church typically has a set of two or three ministers, a deacon, and a bishop whom they might share with another district.
- The ministers and the bishop do the preaching on Sundays, and the bishop acts as the head of the congregation and final level of authority.
- The deacon usually does not preach, but helps with discipline issues and is a bit of a social go-between.
- Deacon will also act as the bishop's 'right-hand' before he himself would get involved.



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What We Learned



Measles Outbreak

- Verifying the accuracy of disease reports. There were several cases with the same first and last name.
- In some situations only certain Amish family members would talk.
- Conflicting reports.
- As outbreak grew, the investigation shifted and act tracing became harder.
- Understanding the dynamics of the Amish. This ranged from work habits, church gatherings, and family interactions. Working around some of the customs in order to get information.



Measles Outbreak

- Outbreaks can happen anywhere
- Educate staff on the community and outbreak
- Communicate with all stakeholders
- Be proactive in messaging instead of defend



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Educate Key Leaders in the Community:

- Reach out to different populations
- Know the key people
- Establish relationships
- Educate those who work with those populations
- Be respectful of beliefs



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